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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,908	07/29/2003	Kui-Chiu Kwok	13990	8105
	7590	09/22/2006	EXAMINER BOECKMANN, JASON J	
Lisa M. Soltis Illinois Tool Works Inc. 3600 West Lake Avenue Glenview, IL 60025			ART UNIT 3752	PAPER NUMBER

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/628,908	<b>Applicant(s)</b> KWOK ET AL. <span style="float: right;">C</span>	
	<b>Examiner</b> Jason J. Boeckmann	<b>Art Unit</b> 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 24-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 24-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/24/2006 has been entered.

### ***Drawings***

The drawings were received on 1/26/2006. These drawings have been entered.

The drawings are objected to under 37 CFR 1.83(a) because they fail to show the lumen 28 of the powder delivery tube 14 as described in the specification (page 5, line15). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and

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where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Although the applicant has provided parenthetical reference numbers throughout the claims in the remarks, the specification still does not identify the phrases "first member," "first feature," "first structural component," "second member," "feature," and "second structural component." From the specification and drawings as filed, it is unclear as to what the above phrases are referring to throughout the indicated claims.

The examiner is unable to precisely find in the specification or determine from the drawings where the claimed subject matter, referred to above, is specifically described

or shown. There are no reference numbers indicating where the claimed features appear in the drawings.

For example, on page 4, line 23 and 27, reference numbers 22 and 16 appear to refer to "barbed fittings," however, the claims seem to refer to them as the first and second members. Additionally on page 6, line 2, reference number 22 and 16 are referred to the first converging and diverging sections, not the first and second members having first reducer and expander sections, as in the claims. On page 5, line 11, reference number 24 refers to a "groove" whereas; in the parenthetically referenced claims seem to refer to reference number 24 as the first and second features of the first and second members.

Examiner believes that the subject matter is clearly shown and suggests that the applicant amends the specification so the features can be understood.

The features listed above, that are not shown in the drawings, do not have corresponding reference numbers in the specification indicating where they are to be found in the drawings. Therefore, the examiner is unclear as to what features shown in the drawings the claims are referring to.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4, as well as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Arm (2,204,392).

Arm shows a dispenser that can be used to dispense material including an opening (the outlet to member 5 on the right side), where the material is discharged and a conduit (5, 21) through which the material is transported from a source (the invention of Arm can be used in a fire hose which inherently includes a source (line 39)), the conduit including a seal member (23, 24), a first member (section 21 on the left) including a first reducer section and a first feature (the groove that accommodates the seal member 23), and a second member (21 on the right) including a first expander section and a second feature (the groove that accommodates the seal member 24), the first and second features cooperation to define a space for the seal member (23, 24) between the first reducer section and the first expander section (figure 2). The second member is downstream from the first member in the flow of material.

Regarding claim 3, the first member (section 21 on the left) is provided in a first structural component (member 5 on the left) and the second member (section 21 on the right) is provided in a second structural component (member 5 on the left) adapted to be coupled to the first structural component, and the seal member (23, 24) sealing the coupling between the first and second structural components.

Regarding claim 4, the seal member (23, 24) provides a transition from the cross sectional area of the outlet of the first reducer section (section 21 on the left) to the cross sectional area of the inlet of the first expander section (section 21 on the right).

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Regarding claim 5, the first reducer section (section 21 on the left) includes a cross-sectional area at an inlet end and a cross-sectional area at an outlet end, the cross-sectional area decreasing uniformly between the two cross-sectional areas (figure 2).

Regarding claims 6, 7, the first expander section (section 21 on the right) includes a cross-sectional area at an inlet end and a cross-sectional area at an outlet end, the cross-sectional area increasing uniformly between the two cross-sectional areas (figure 2).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over LeCompte (5,704,825) in view of Arm (2,204,392).

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LeCompte shows a dispenser (20) for dispensing pulverulent coating material including an opening (44) through which the pulverulent material is discharged and a conduit (12, 40) through which the pulverulent material is transported from a source (column 3, lines 14-5), a second reducer section (28, 30) and a second expander section (26, 36) coupled to the second reducer section, the second expander section downstream in the flow of the pulverulent material from the second reducer section, but does not specifically disclose that the dispenser includes a seal member, a first member including a first reducer section and a first, and a second including a first expander section and a second feature, the first and second features cooperation to define a space for the seal member between the first reducer section and the first expander section with the second member is downstream from the first member in the flow of material. However, Arm shows a hose and pipe quick disconnect coupler that includes a seal member (23, 24), a first member (section 21 on the left) including a first reducer section and a first feature (the groove that accommodates the seal member 23), and a second member (21 on the right) including a first expander section and a second feature (the groove that accommodates the seal member 24), the first and second features cooperation to define a space for the seal member (23, 24) between the first reducer section and the first expander section (figure 2). The second member is downstream from the first member in the flow of material. Therefore, It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to add the quick disconnect coupler, of Arm, including the seal member and the first reducer and expander sections, to the conduit (12) of LeCompte, upstream of and the second



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reducer section (28, 30) so that the nozzle can be easily removed from the source in order to clean and/or replace it.

Regarding claim 8, the second reducer section (28, 30) includes a cross-sectional area at an inlet end and a cross-sectional area at an outlet end, the cross-sectional area decreasing uniformly between the two cross-sectional areas (figure 2).

Regarding claims 9, 10 and 12, the second expander section (26, 36) includes a cross-sectional area at an inlet end and a cross-sectional area at an outlet end, the cross-sectional area increasing uniformly between the two cross-sectional areas (figure 2).

Regarding claim 11, the first reducer section (section 21 on the left) includes a cross-sectional area at an inlet end and a cross-sectional area at an outlet end, the cross-sectional area decreasing uniformly between the two cross-sectional areas (figure 2).

Regarding claim 13, the first expander section (section 21 on the right) includes a cross-sectional area at an inlet end and a cross-sectional area at an outlet end, the cross-sectional area increasing uniformly between the two cross-sectional areas (figure 2).

Regarding claims 19-24, the first reducer section and the first expander section include inlets and outlets; the first reducer section outlet has that same cross-sectional area as the inlet of the first expander section (see figure 2 of Arm). The second reducer section and the second expander section include inlets and outlets; the second reducer

section outlet has that same cross-sectional area as the inlet of the second expander section (see figure 2 of LeCompte).

Claims 14 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gruber (5m505,566) in view of LeCompte (5,704,825).

Gruber shows a dispenser for dispensing pulverulent material including an opening (powder coating gun 14b), a conduit (15, 14, 14a) through which the pulverulent material is transported from a source to the opening, the conduit including a first reducer section (fig 1) and a first expander section (fig 1), the first expander section being downstream in the flow of material from the first reducer section, but does not show a second reducer section and a second expander section. However, LeCompte discloses a coating gun including an outlet (44), a reducer section (30, 28) and an expander section (26, 36) with the expander section being downstream in the flow of material from the reducer section. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to substitute the coating gun of LeCompte for the coating gun (14b) of Gruber, putting the reducer section (the second reducer section) of LeCompte downstream of the first expander section of Gruber, in order to discharge an even coat of pulverulent material from the dispenser with the rectangular cross-section of LeCompte's coating gun (figure 3).

***Response to Arguments***

Applicant's arguments with respect to claim 1-14 and 24-26 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Korzeniowski (6,969,052) shows a section of conduit including first and second reducer sections and first and second expander sections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason J. Boeckmann whose telephone number is (571) 272-2708. The examiner can normally be reached on 7:30 - 5:00 m-f, first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Scherbel can be reached on (571) 272-4919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

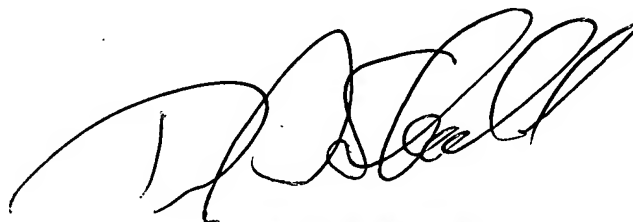
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9-11-06



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